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## GREAT DESTRUCTION OF BIRDS' EGGS AND NESTLINGS IN THE SIERRA NEVADA

By A. M. INGERSOLL

WITH TWO PHOTOS BY MRS W. W. COOLEY

AS WE approached Cisco, Placer County, California, toward evening of June 7, 1912, the air seemed filled with the songs and call-notes of mountain birds. Observing that we had reached a section where birds were more numerous than is usual at so high an altitude as 5900 feet, I stopped my automobile at the only hotel in that charming resort and engaged accommodation for Mrs. Ingersoll and self. Knowing of no locality in the Sierras where small birds nested more plentifully than in that particular place, I anticipated the pleasure of adding much choice material to my collection of eggs. A few days' search, however, convinced me that I was not the only nest hunter, and that the Blue-fronted Jays had a great advantage over one who collects full sets only. Jays were no more abundant than in similar places elsewhere, but these particular birds doubtless had an extra strong desire for eggs and naked birds. No jays were detected in the act of eating well-feathered young. Other natural enemies were doubtless the cause of some of the nests being tenantless. But as the jays were the only robbers caught in the act of taking eggs and young, the principal havoc is attributed to them and to an unseasonable snow fall. It is to be hoped that birds in the surrounding localities were more fortunate in raising their young. For a wide spread destruction like that at Cisco would tend to wipe some species out of existence.

Following a week of delightful weather, a cold rain began falling on the morning of June 22, by night turning to sleet. At six o'clock on the morning of June 23 there was a depth of three and one-half inches of snow on the level. This snow was of a wet, clinging nature, weighing down every leaf and twig, and causing large branches and limbs of some deciduous trees to break. Clumps of bushes were generally weighted down to about half their height on the previous day.

Many nests that were on flexible branches had their contents spilled out, while those built against trunks of small trees or between the main stems of bushes were later in the day bombarded with huge chunks of snow dislodged by the wind. This permitted branches to spring violently up to their accustomed position, a further cause of destruction. Horizontal branches of large fir trees drooped and crushed nests that chanced to be located between them. It is easy to imagine that many sleeping birds were crushed to death as the snow-laden branches quietly settled on them. Personally I know of two instances. A brooding Audubon Warbler was killed, and two of her three eggs broken, in the nest situated thirty feet above the ground on the branch of a fir. The other instance was that of a Western Wood Pewee picked up from the ground with nest on dead aspen limb that had broken off and fallen from a height of some twenty feet. Another Wood Pewee's nest destroyed in the same manner, was found later in the day. While searching a large pine stub for the nest of a Sierra Creeper, I discovered a female Calaveras Warbler under a partially detached piece of bark. Her feathers were quite wet, and as the crevice was rather dry, I presume this ground-nesting bird was flooded out of her home and sought shelter as death approached.

While roaming over the mountain side at various times previous to the snow fall, no less than ten Calaveras Warblers expressed anxiety and disapproval of my presence when trespassing near their chosen nesting sites. Careful watching revealed two nests under process of construction. After the snow fall, I searched over the same ground on many occasions, and, as no warblers were heard or seen that could be identified as this species, I am of the opinion that all, or nearly all, perished in the catastrophe of June 23.

An apparent loss was only noticeable in three other varieties of birds. The fairly common Western Tanager was probably reduced in numbers one-third. Three pairs of Olive-sided Flycatchers had selected home sites at a distance of one half mile of each other. One had a nest more than eighty feet up on a horizontal branch of an immense fir; the others undoubtedly had nests concealed in dense foliage of lofty cedars. As but one bird was observed between June 22 and July 9, I surmise that the snow proved fatal to the others, for birds having such distinctive notes could hardly be overlooked by a person searching for them.



Fig. 22. CISCO, CALIFORNIA, FROM THE HOTEL GROUNDS; PHOTO TAKEN ABOUT 8 A. M., JUNE 30, 1912; TWO HOURS LATER THE TREES WERE NEARLY FREE OF SNOW

Photo by Mrs. W. W. Cooley

For a week previous to June 22, I daily noticed a flock of six to seven Pine Siskins around the hotel barn. One fell a victim to the house cat; and the others vanished a day later. I might attribute their total disappearance to the cat and the snow, but I am inclined to believe that they moved on to a better feeding ground to establish a summer home; for a favorite food of the Siskin is the unripe seed of the dandelion.

The above mentioned cat was very destructive to bird life. He was seen to jump and catch a male Northern Violet-green Swallow as it flew over the croquet ground. He was also seen to stealthily approach and make an unsuccessful spring at a Pacific Nighthawk resting on the bare earth at the side of a mountain trail; and he was often found prowling beneath brushy thickets in search of prey.

As one cannot accurately estimate the mortality among adult birds, I merely state facts actually observed. This census of nests, found by the writer between

June 7 and July 9, 1912, within a radius of two miles of Cisco Postoffice, will enable the reader to form a fair idea of the tremendous loss in young birds and eggs in nests exposed to the elements and to the jays.

One nest of Plumed Quail (*Oreortyx p. plumifera*). The nest was evidently destroyed by an animal having sharp claws and long black hair—presumably a skunk. Sticky pieces of egg-shell were scattered around the nesting hollow.

One nest of Red-breasted Sapsucker (*Sphyrapicus v. daggetti*). Nest about ready for eggs, when birds were shot by a man camping under a nearby tree.

One nest of Olive-sided Flycatcher (*Nuttallornis borealis*). Nest was examined by means of a glass from a distance of 80 or 90 feet below. Previous to June 22 the birds were often seen, but not after that date.

Three nests of Traill Flycatcher (*Empidonax trailli*). A jay was seen at nest that had contained two eggs a few hours before. The other nests were wrecked, before completion, by snow bending apart the willow stems between which the nests were placed.

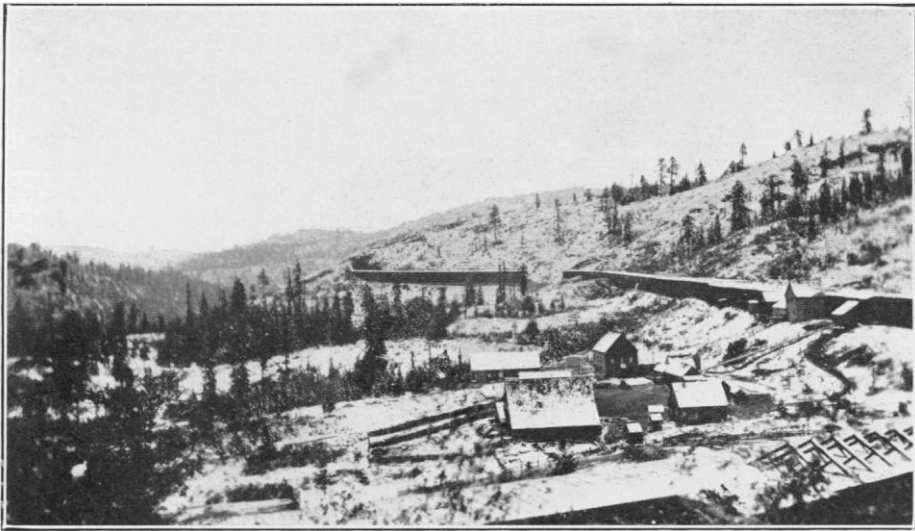


Fig. 23. CISCO, FROM ABOVE RAILROAD SNOW-SHED; PHOTO TAKEN ON JUNE 23, 1912, AFTER MUCH OF THE SNOW HAD MELTED

Photo by Mrs. W. W. Cooley

Nine nests of Western Wood Pewee (*Myiochanes r. richardsoni*). One nest and three eggs were taken by myself. One was partially dislodged by a squirrel running over same, when frightened by me while climbing an adjoining tree to examine a Kinglet's nest. Two nests were wrecked by snow. Two were emptied by jays (?). A bird was flushed from a single egg in a nest that contained two eggs when examined a few days previously. Two nests containing two and three eggs, respectively, were later observed to have brooding birds on each.

Four nests of White-crowned Sparrow (*Zonotrichia l. leucophrys*). One incomplete nest abandoned; also a nest with a fresh egg was abandoned for reason unknown to me. A nest with four eggs was later found to contain but a single sucked egg. One nest and four eggs were taken by a guest at the hotel.

Seven nests of Western Chipping Sparrow (*Spizella p. arizonae*). One nest and four eggs taken by a guest at the hotel. Two nests were emptied by

jays. Two with sets of eggs were destroyed by snow. One new nest was not later examined. One nest having eggs in it was inspected at various times until the young were about six days old, when some tragedy then occurred that left but a ruined home among the drooping branches of a tamarack tree.

Seven nests of Sierra Junco (*Junco o. thurberi*). Two nests with sets of eggs were taken by myself. One of these was peculiarly located, being back ten inches from opening of an old gopher's burrow, and six inches below the earth's surface. The eggs were out of sight and would have escaped my notice had the bird not flushed at close range. The situation of the burrow was a slight ridge or mound surrounded at a distance of 25 to 100 feet by huge drifts of snow remaining from winter storms. All new snow that fell on June 23 melted away within forty-eight hours. Two nests that held eggs when discovered were later found to contain dead nestlings. Two nests held dented and cracked eggs after the snow. One nest and five young were destroyed by some mammal, probably the same that dug the nearby nest of Plumed Quail out of the ground.

Sixteen nests of Thick-billed Fox Sparrow (*Passerella i. megarhyncha*). Two nests and sets of eggs were taken by myself. Two nests were emptied of eggs by children. One with two eggs was abandoned before incubation commenced. One with four eggs was destroyed by sheep feeding on foliage of bush. Five nests with dead nestlings were examined after the snow. Four nests were emptied by jays. One nest containing two pipped eggs was discovered through the actions of a jay that had its feast interrupted.

Two nests of Blue-fronted Jay (*Cyanocitta s. frontalis*). Only examined from beneath. Both nests placed on the inside framework of a snow-shed.

Two nests of Western Evening Grosbeak (*Coccothraustes v. montanus*). One contained but a single nestling a few hours old, when found July 3. On previous day a jay, chased by anxious grosbeaks and vociferous smaller birds, was seen to leave the clump of fir trees in which the grosbeaks' home was located, at a height of forty feet. I have no doubt but what the jay had feasted on the contents of this nest, and later came back and ate the remaining tidbit, for the nest was found to be empty on July 6. The other nest contained two dried-up nestlings when found by me.

Two nests of Cassin Purple Finch (*Carpodacus cassini*). The jays took eggs from both nests.

Four nests of Green-tailed Towhee (*Oreospiza chlorura*). Nest and four eggs taken by myself. The jays (?) emptied the other nests.

Five nests of Western Tanager (*Piranga ludoviciana*). Two nests and sets of eggs collected by myself. One nest examined from a distance of fifty feet only. The birds were not seen around this nest after the snowfall. Two nests were probably emptied by the jays.

Two nests of Tree Swallows (*Iridoprocne bicolor*). Young in both of them.

Six nests of Western Warbling Vireo (*Vireosylva g. swainsoni*). All six were destroyed, presumably by the jays.

Two nests of Calaveras Warbler (*Vermivora r. gutturalis*). Both abandoned before completion.

Three nests of California Yellow Warbler (*Dendroica a. brewsteri*). One nest and set of four eggs collected by myself. One destroyed by snow. One emptied by jays (?). This last nest held about two table-spoons full of snow water on June 25. I placed a corner of a pocket handkerchief in the nest and siphoned all the water away, then reinforced the weak willow branch on which the nest was attached. My assistance was evidently appreciated by the birds, for

within fifty-one hours two handsome eggs were deposited in the still moist nest. They were gone and nest badly mussed when next examined by me, July 1.

Seven nests of Audubon Warbler (*Dendroica auduboni*). One nest and set of eggs collected by myself. Two nests were destroyed by snow. The other four were probably emptied by the jays. A jay was seen to carry a nestling from one of them.

Three nests of Macgillivray Warbler (*Oporornis tolmiei*). I collected one nest and set of eggs. The others were visited by the jays. They left two sucked eggs in one nest and numerous fragments of sticky shell on the foliage of the bush in which nest was hidden from view.

Six nests of Golden Pileolated Warbler (*Wilsonia p. chryseola*). I collected two sets of eggs. The eggs in four nests hatched but seemed to have met the usual fate within one to three days.

One nest of Rock Wren (*Salpinctes o. obsoletus*). It was placed out of sight and reach, in crevice in face of a small cliff. Entrance to the nest was paved with pebbles and pieces of coal.

Two nests of Sierra Creeper (*Certhia f. zelotes*). Young in both of them.

One nest of Slender-billed Nuthatch (*Sitta c. aculeata*). Not closely examined. A bird was seen to chase a chipmunk away from a tottering pine stub and then enter a crack at an estimated height of thirty feet.

Eight nests of Mountain Chickadee (*Parus g. gambeli*). Eggs were taken from one nest by a guest at hotel. Two nests held well-incubated eggs; and five held big families of young birds.

Three nests of Western Golden-crowned Kinglet (*Regulus s. olivaceus*). One contained a set of ten eggs on point of hatching. Two nests were torn out by the jays (?).

Two nests of Ruby-crowned Kinglet (*Regulus calendula*). One contained a set of eight highly incubated eggs on June 20. The other held a single fresh egg on July 6, and was empty the next day.

Three nests of Russet-backed Thrush (*Hylocichla u. ustulata*). One nest and five eggs, an unusual number for set of this species, was collected by myself. One new nest was tilted over by snow. One nest was partially emptied of fresh eggs by jays.

Twenty-four nests of Western Robin (*Planesticus m. propinquus*). One nest placed but four feet from the ground on small branches of a young fir, was tilted over by weight of snow, causing an egg to roll out and break. As the bird was endeavoring to incubate the remaining eggs in this poorly secured nest, I thought it best to remove the hazard by lifting the nest up from its original site and fastening with twine to the next higher whorl of branches. The eggs were successfully hatched, and the young reached the age of about seven days, when they, and probably one parent, were destroyed by an enemy unknown to me. Feathers of an adult robin were scattered beneath the empty nest. Two nests and sets of eggs were collected by myself, one of these sets consisting of six eggs, certainly an unusual number. Seven sets of two to four eggs were known to be successfully hatched. The snow-water flooded one nest and caused four eggs to be abandoned. Many nests were not looked into, but some that were known to be occupied previous to the snow were apparently deserted after June 23.

Three nests of Mountain Bluebird (*Sialia currucoides*). I removed a nest and set of six eggs from a pigeon-house that was on the inside of the railroad freight-house. The birds constructed another nest and presumably raised a fam-

ily in the same box. The other nest was situated in a knot-hole in a living aspen tree.

I am of the opinion that fledgelings were raised in but few of the one hundred and thirty nests exposed to snow and the Blue-fronted Jays; while most of the sixteen nests that were placed in cavities of trees, stumps, or rocks, escaped destruction of contents. The robins were seemingly unmolested by jays.

On leaving for Summit Station, July 9, I stopped for a few hours nest hunting along the state road at a distance of six to eight miles above Cisco and here I saw two Clarke Nutcrackers, one Hammond Flycatcher, three California Pine Grosbeaks, and a Sierra Hermit Thrush. All four are species of birds not observed at Cisco. I failed to discover the nests of any of them, however.

## BIRDS OBSERVED IN THE SUMMER OF 1912 AMONG THE SANTA BARBARA ISLANDS

By HOWARD WRIGHT and G. K. SNYDER

WITH TWO PHOTOS BY THE AUTHOR

ON JULY 1st, 1912, Mr. J. R. MacIntock, W. S. Wright, Emerson Roche and the writers left San Pedro, on a fifty-foot sloop, for a short trip among the islands which lie off this portion of the California coast.

Our first stop was Santa Barbara Island, where we arrived early on the morning of July 2, after having been becalmed nearly all night. While approaching the island, we saw many flocks of Cassin Auklets, a fact which was hardly to be expected since Mr. George Willett found only a few pairs breeding here the year before.

When the rattle of the anchor chain broke the stillness, a great flock of gulls arose and came clamoring toward the boat. They were very tame and came almost to our hands to devour the scraps from our breakfast table.

The day was spent in looking about the island. We found the gulls breeding in four separate colonies, all of which contained young. A single set of two, which turned out to be addled, were the only eggs of this species found. On the northern slope of the island was a large colony of California Brown Pelicans. There were several hundred nests containing young in all stages of development. A single set of *three* addled eggs served to intensify the impression of general prosperity in the colony, which gave every indication of rapid increase in numbers.

On the northwestern promontory we noted an adult Bald Eagle accompanied by a full-grown youngster. They circled about screaming loudly but seemingly having little fear of the intruders. A careful search of this territory failed to reveal any Cassin Auklet's burrows, so we concluded that their nesting was still confined to the adjacent rock, where Mr. Willett found them in 1911.

On the northeastern point of the island a single egg of the Xantus Murrelet was found, at the end of a short burrow under a rock. No bird was on the nest and though the egg was apparently fresh it was cold when found.

The second day at this island was spent in visiting a large colony of Brandt Cormorants. It was located near the water's edge, on the northern side of the island opposite the detached rock which is about a hundred yards from shore.